

Message

From: Beeler, Cindy [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=9B11E688258C462BAB293A6DF8FF4B27-BEELER, CYNTHIA]
Sent: 7/10/2019 2:22:51 PM
To: Mills, Derek [Mills.Derek@epa.gov]
Subject: RE: CO AIMM (vs. EPA AMEL) ... FW: Alternative AIMM Application - FLIR Uncooled LWIR Camera for OGI
Attachments: GasDetectionAlternatives_Status_032519_v2.docx

Derek – FYI, attached is a short summary of the status of gas detection technologies for use in oil & gas and Region 8's involvement in such.

From: Beeler, Cindy
Sent: Wednesday, July 10, 2019 8:20 AM
To: Mills, Derek <Mills.Derek@epa.gov>
Subject: RE: CO AIMM (vs. EPA AMEL) ... FW: Alternative AIMM Application - FLIR Uncooled LWIR Camera for OGI

Derek –

Ex. 5 AC/DP

Here's a summary of a call a while ago with R8 & HQ so that I could provide a response to CO. The 'summary of the call' was my response to CO at the time (which I provided orally rather than in writing):

7/18/18 Meeting Attendees:

Karen Marsh – OAR/OAQPS/SPPD (Sector Policies and Programs Division)/FIG (Fuels & Incineration Group) – Technical Lead on O&G LDAR NSPS OOOOa
Gerri Garwood - OAR/OAQPS/SPPD/MPG (Measurement Policy Group)
Marcia Mia – OECA/OC (Office of Compliance)/MAMPD (Monitoring Assistance and Media Programs Division)/Air Branch – Air Compliance Oil & Gas
Amy Branning – OGC/ARLO (Air and Radiation Law Office) – Attorney supporting NSPS OOOO/OOOOa
Steve Odendahl – R8 ORC (Office of Regional Counsel) – Attorney supporting CAA, SIP
Abby Fulton – R8/OPRA/Air Program/Air Quality Planning Unit - CO SIP
Cindy Beeler – R8/ECEJ/Air & Toxics Technical Enforcement Program

Review of Summary

Marcia Mia – OK (8/27/18)

Ex. 5 AC/DP

Summary of Call:

-

-

Ex. 5 AC/DP

-

-

Ex. 5 AC/DP

Cindy Beeler

US EPA Region 8

Tel: 303-312-6204

Beeler.Cindy@epa.gov



CONFIDENTIALITY NOTICE: This e-mail, including all attachments, is for the sole use of the intended recipients and may contain Confidential and privileged information. Any unauthorized use, disclosure or distribution is prohibited. If you are not the intended recipient, please contact the sender and destroy all copies of this message.

From: Mills, Derek

Sent: Friday, July 5, 2019 1:59 PM

To: Beeler, Cindy <Beeler.Cindy@epa.gov>

Subject: RE: CO AIMM (vs. EPA AMEL) ... FW: Alternative AIMM Application - FLIR Uncooled LWIR Camera for OGI

Ex. 5 AC/DP

Derek Mills

Attorney, Office of General Counsel

U.S. Environmental Protection Agency

(202) 564-3341

From: Beeler, Cindy

Sent: Tuesday, July 2, 2019 6:37 PM

To: Mills, Derek <Mills.Derek@epa.gov>

Subject: RE: CO AIMM (vs. EPA AMEL) ... FW: Alternative AIMM Application - FLIR Uncooled LWIR Camera for OGI

Ex. 5 AC/DP

Cindy Beeler

US EPA Region 8

Tel: 303-312-6204
Beeler.Cindy@epa.gov



CONFIDENTIALITY NOTICE: This e-mail, including all attachments, is for the sole use of the intended recipients and may contain Confidential and privileged information. Any unauthorized use, disclosure or distribution is prohibited. If you are not the intended recipient, please contact the sender and destroy all copies of this message.

From: Mills, Derek
Sent: Tuesday, July 2, 2019 12:27 PM
To: Marsh, Karen <Marsh.Karen@epa.gov>; Beeler, Cindy <Beeler.Cindy@epa.gov>; Dewees, Jason <Dewees.Jason@epa.gov>; Garwood, Gerri <Garwood.Gerri@epa.gov>
Cc: Mia, Marcia <Mia.Marcia@epa.gov>; Branning, Amy <Branning.Amy@epa.gov>; Fulton, Abby <Fulton.Abbby@epa.gov>
Subject: RE: CO AIMM (vs. EPA AMEL) ... FW: Alternative AIMM Application - FLIR Uncooled LWIR Camera for OGI

Ex. 5 AC/DP

Derek Mills
Attorney, Office of General Counsel
U.S. Environmental Protection Agency
(202) 564-3341

From: Marsh, Karen
Sent: Tuesday, July 2, 2019 1:27 PM
To: Beeler, Cindy <Beeler.Cindy@epa.gov>; Mills, Derek <Mills.Derek@epa.gov>; Dewees, Jason <Dewees.Jason@epa.gov>; Garwood, Gerri <Garwood.Gerri@epa.gov>
Cc: Mia, Marcia <Mia.Marcia@epa.gov>; Branning, Amy <Branning.Amy@epa.gov>; Fulton, Abby <Fulton.Abbby@epa.gov>
Subject: RE: CO AIMM (vs. EPA AMEL) ... FW: Alternative AIMM Application - FLIR Uncooled LWIR Camera for OGI

Derek,

Ex. 5 AC/DP

Ex. 5 AC/DP

Thanks!

Karen

Karen R. Marsh, PE
US EPA, OAQPS, Sectors Policies and Programs Division
Fuels and Incineration Group
109 TW Alexander Drive, Mail Code E143-05
Research Triangle Park, NC 27711
Direct: (919) 541-1065; email: marsh.karen@epa.gov

From: Beeler, Cindy
Sent: Monday, July 01, 2019 4:58 PM
To: Mills, Derek <Mills.Derek@epa.gov>; Dewees, Jason <Dewees.Jason@epa.gov>; Marsh, Karen <Marsh.Karen@epa.gov>; Garwood, Gerri <Garwood.Gerri@epa.gov>
Cc: Mia, Marcia <Mia.Marcia@epa.gov>; Branning, Amy <Branning.Amy@epa.gov>; Fulton, Abby <Fulton.Abbey@epa.gov>
Subject: RE: CO AIMM (vs. EPA AMEL) ... FW: Alternative AIMM Application - FLIR Uncooled LWIR Camera for OGI

Derek –

See my responses in red below ...

Cindy Beeler
US EPA Region 8
Tel: 303-312-6204
Beeler.Cindy@epa.gov



CONFIDENTIALITY NOTICE: This e-mail, including all attachments, is for the sole use of the intended recipients and may contain Confidential and privileged information. Any unauthorized use, disclosure or distribution is prohibited. If you are not the intended recipient, please contact the sender and destroy all copies of this message.

From: Mills, Derek
Sent: Monday, July 1, 2019 9:29 AM
To: Beeler, Cindy <Beeler.Cindy@epa.gov>; Dewees, Jason <Dewees.Jason@epa.gov>; Marsh, Karen <Marsh.Karen@epa.gov>; Garwood, Gerri <Garwood.Gerri@epa.gov>
Cc: Mia, Marcia <Mia.Marcia@epa.gov>; Branning, Amy <Branning.Amy@epa.gov>
Subject: RE: CO AIMM (vs. EPA AMEL) ... FW: Alternative AIMM Application - FLIR Uncooled LWIR Camera for OGI

Hi All,

I have a few initial thoughts and questions. Thanks!

Ex. 5 AC/DP

Derek Mills
Attorney, Office of General Counsel
U.S. Environmental Protection Agency
(202) 564-3341

From: Beeler, Cindy
Sent: Monday, July 1, 2019 10:20 AM
To: Dewees, Jason <Dewees.Jason@epa.gov>; Marsh, Karen <Marsh.Karen@epa.gov>; Garwood, Gerri <Garwood.Gerri@epa.gov>
Cc: Mia, Marcia <Mia.Marcia@epa.gov>; Branning, Amy <Branning.Amy@epa.gov>; Mills, Derek <Mills.Derek@epa.gov>
Subject: RE: CO AIMM (vs. EPA AMEL) ... FW: Alternative AIMM Application - FLIR Uncooled LWIR Camera for OGI

Ex. 5 Deliberative Process (DP)

Thanks,

Cindy Beeler
US EPA Region 8
Tel: 303-312-6204
Beeler.Cindy@epa.gov



CONFIDENTIALITY NOTICE: This e-mail, including all attachments, is for the sole use of the intended recipients and may contain Confidential and privileged information. Any unauthorized use, disclosure or distribution is prohibited. If you are not the intended recipient, please contact the sender and destroy all copies of this message.

From: Dewees, Jason
Sent: Monday, July 1, 2019 8:17 AM
To: Marsh, Karen <Marsh.Karen@epa.gov>; Beeler, Cindy <Beeler.Cindy@epa.gov>; Garwood, Gerri <Garwood.Gerri@epa.gov>
Cc: Mia, Marcia <Mia.Marcia@epa.gov>; Branning, Amy <Branning.Amy@epa.gov>
Subject: RE: CO AIMM (vs. EPA AMEL) ... FW: Alternative AIMM Application - FLIR Uncooled LWIR Camera for OGI

Ex. 5 Deliberative Process (DP)

From: Marsh, Karen
Sent: Monday, July 1, 2019 10:12 AM
To: Beeler, Cindy <Beeler.Cindy@epa.gov>; Garwood, Gerri <Garwood.Gerri@epa.gov>; Dewees, Jason <Dewees.Jason@epa.gov>
Cc: Mia, Marcia <Mia.Marcia@epa.gov>; Branning, Amy <Branning.Amy@epa.gov>
Subject: RE: CO AIMM (vs. EPA AMEL) ... FW: Alternative AIMM Application - FLIR Uncooled LWIR Camera for OGI

Ex. 5 Deliberative Process (DP)

Karen R. Marsh, PE
US EPA, OAQPS, Sectors Policies and Programs Division
Fuels and Incineration Group
109 TW Alexander Drive, Mail Code E143-05
Research Triangle Park, NC 27711
Direct: (919) 541-1065; email: marsh.karen@epa.gov

From: Beeler, Cindy
Sent: Monday, July 01, 2019 10:08 AM
To: Marsh, Karen <Marsh.Karen@epa.gov>; Garwood, Gerri <Garwood.Gerri@epa.gov>; Dewees, Jason <Dewees.Jason@epa.gov>
Cc: Mia, Marcia <Mia.Marcia@epa.gov>; Branning, Amy <Branning.Amy@epa.gov>
Subject: CO AIMM (vs. EPA AMEL) ... FW: Alternative AIMM Application - FLIR Uncooled LWIR Camera for OGI

Karen/Gerri/Jason – FYI ...

FLIR has applied to CO for an Alternative AIMM for the proposed use of FLIR Uncooled LWIR Camera Systems for Optical Gas Imaging (OGI) for O&G LDAR. Their application and supporting documentation is attached.

Thanks for your earlier feedback on this instrument when I reported out to you on my monthly meeting with the CO AIMM Team. CO made the determination that OGI cameras that only detect methane must go through the Alternative AIMM approval process. Here's the language CO added to their AIMM web site:

NOTE: An IR camera that only detects methane or another single pollutant does not meet the definition of an IR camera under Regulation 7 and is required to obtain an Alternative AIMM approval prior to use for meeting Regulation 7 monitoring requirements. Because Regulation 7 is a methane and volatile organic compounds (VOC) rule for oil and gas, "hydrocarbons" in the IR camera definition in Regulation 7 means methane and VOC. However, the Alternative AIMM provision in Regulation 7 allows for approval of technologies that can only detect methane or another single pollutant if the Alternative AIMM requirements are met.

This will be the first AIMM application that needs CO evaluation in quite a while (since Rebellion Photonics).

Ex. 5 Deliberative Process (DP)

Cindy Beeler
US EPA Region 8
Tel: 303-312-6204
Beeler.Cindy@epa.gov

CONFIDENTIALITY NOTICE: This e-mail, including all attachments, is for the sole use of the intended recipients and may contain Confidential and privileged information. Any unauthorized use, disclosure or distribution is prohibited. If you are not the intended recipient, please contact the sender and destroy all copies of this message.

From: Taylor - CDPHE, Timothy <timothy.taylor@state.co.us>
Sent: Thursday, June 27, 2019 3:28 PM
To: Beeler, Cindy <Beeler.Cindy@epa.gov>
Subject: Fwd: Alternative AIMM Application - FLIR Uncooled LWIR Camera for OGI

Sorry Cindy, I forgot to include you on the last email!

----- Forwarded message -----

From: Taylor - CDPHE, Timothy <timothy.taylor@state.co.us>
Date: Thu, Jun 27, 2019 at 3:27 PM
Subject: Fwd: Alternative AIMM Application - FLIR Uncooled LWIR Camera for OGI
To: Jennifer Mattox <jennifer.mattox@state.co.us>, Neustifter - CDPHE, Jeremy <jeremy.neustifter@state.co.us>, Sharp - CDPHE, Timothy <timothy.sharp@state.co.us>

Interesting. This is for FLIR's methane-only detection camera. Maybe not too surprising considering our updated guidance on this recently added to the AIMM web site.

----- Forwarded message -----

From: **Raymer, Rob (US)** <Rob.Raymer@flir.com>

Date: Thu, Jun 27, 2019 at 3:18 PM

Subject: Alternative AIMM Application - FLIR Uncooled LWIR Camera for OGI

To: cdphe_aimm@state.co.us <cdphe_aimm@state.co.us>

Dear Sirs:

Please find attached Alternative AIMM Application and supporting documentation for the proposed use of FLIR Uncooled LWIR Camera Systems for Optical Gas Imaging (OGI).

Please note that I had an issue with saving the selection on one of the checkbox form fields in this document.

For clarification, the following response should be:

- Will the proposed Alternative AIMM be used exclusively outside of the Denver Metro-Northern Front Range Ozone Control Area? **The response is "NO"**

Please let me know if you need additional information.

Best Regards,

Rob Raymer

Strategic Business Development Manager

Optical Gas Imaging/Oil & Gas Industry

FLIR Systems, Inc.

911 Old Wagon Trail Circle, Lafayette, CO 80026

Direct: +1 978-430-2958

Email: rob.raymer@flir.com | www.flir.com

Notice to recipient: This email is meant for only the intended recipient of the transmission, and may be a communication privileged by law, subject to export control restrictions or that otherwise contains proprietary information. If you receive this email by mistake, please notify us immediately by replying to this message and then destroy it and do not review, disclose, copy or distribute it. Thank you in advance for your cooperation.

--

Timothy Taylor
Work Lead - IR Camera Inspection Program
Oil & Gas Team



COLORADO
Air Pollution Control Division
Department of Public Health & Environment

4300 Cherry Creek Drive South, Denver, CO 80246-1530
office: 303-692-3173 | mobile: 303-332-5769 | fax: 303-782-0278
email: timothy.taylor@state.co.us | www.colorado.gov/cdphe/apcd

Are you curious about ground-level ozone in Colorado? Visit our [ozone webpage](#) to learn more.

--

Timothy Taylor
Work Lead - IR Camera Inspection Program
Oil & Gas Team



COLORADO
Air Pollution Control Division
Department of Public Health & Environment

4300 Cherry Creek Drive South, Denver, CO 80246-1530
office: 303-692-3173 | mobile: 303-332-5769 | fax: 303-782-0278
email: timothy.taylor@state.co.us | www.colorado.gov/cdphe/apcd

Are you curious about ground-level ozone in Colorado? Visit our [ozone webpage](#) to learn more.